Aeotec Smart Switch 6 ZW096-A02 Manual

Contents

Aeotec

Smart Switch 6

SKU: ZW096-A02


Z-WAVE
PLUS


SECURE

Quickstart

This is a
secure
On/Off Power Switch
for
U.S. / **Canada** / **Mexico**.

To run this device please connect it to your mains power supply.

To add this device to your network execute the following action:
Turn the primary controller of Z-Wave network into inclusion mode, short press the products Action button that you can find on the product's housing.

Please refer to the
Manufacturers Manual for more information.

Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law.

The manufacturer, importer, distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material.
Use this equipment only for its intended purpose. Follow the disposal instructions.

Do not dispose of electronic equipment or batteries in a fire or near open heat sources.

What is Z-Wave?

Z-Wave is the international wireless protocol for communication in the Smart Home. This device is suited for use in the region mentioned in the Quickstart section.

Z-Wave ensures a reliable communication by reconfirming every message (**two-way communication**) and every mains powered node can act as a repeater for other nodes (**meshed network**) in case the receiver is not in direct wireless range of the transmitter.

This device and every other certified Z-Wave device can be **used together with any other certified Z-Wave device regardless of brand and origin** as long as both are suited for the same frequency range.

If a device supports **secure communication** it will communicate with other devices secure as long as this device provides the same or a higher level of security. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility.

For more information about Z-Wave technology, devices, white papers etc. please refer to www.z-wave.info.

Product Description

Aeotec Smart Switch 6 is a low-cost Z-Wave Switch plug-in module specifically used to enable Z-Wave command and control (on/off) of any plug-in tool. It can report immediate wattage consumption or kWh energy usage over a period of time. In the event of power failure, non-volatile memory retains all programmed information relating to the units operating status.Its surface has a Smart RGB LED, which can be used for indicating the output load status or strength of the wireless signal. You can configure its indication colour according to your favour.The Smart Switch is also a security Z-Wave device and supports Over The Air (OTA) feature for the products firmware upgrade.

Prepare for Installation / Reset

Please read the user manual before installing the product.

In order to include (add) a Z-Wave device to a network it **must be in factory default state.** Please make sure to reset the device into factory default. You can do this by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommended to use the primary controller of the previous network to make sure the very device is excluded properly from this network.

Reset to factory default

This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

Press and hold the Action button that you can find on the product’s housing for 20 seconds and then release. This

procedure should only be used when the primary controller is inoperable.

Safety Warning for Mains Powered Devices

ATTENTION: only authorized technicians under consideration of the country-specific installation guidelines/norms may do works with mains power. Prior to the assembly of the product, the voltage network has to be switched off and ensured against re-switching.

Inclusion/Exclusion

On factory default the device does not belong to any Z-Wave network. The device needs to be **added to an existing wireless network** to communicate with the devices of this network. This process is called **Inclusion**.

Devices can also be removed from a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

Inclusion

Turn the primary controller of Z-Wave network into inclusion mode, short press the products Action button that you can find on the product's housing.

Exclusion

Turn the primary controller of Z-Wave network into exclusion mode, short press the products Action button that you can find on the product's housing.

Quick trouble shooting

Here are a few hints for network installation if things dont work as expected.

1. Make sure a device is in factory reset state before including. In doubt exclude before include.
2. If inclusion still fails, check if both devices use the same frequency.
3. Remove all dead devices from associations. Otherwise you will see severe delays.
4. Never use sleeping battery devices without a central controller.
5. Dont poll FLIRS devices.
6. Make sure to have enough mains powered device to benefit from the meshing

Association – one device controls an other device

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, …). In case the event happens all devices stored in the respective association group will receive the same wireless command wireless command, typically a 'Basic Set' Command.

Association Groups:

Group NumberMaximum NodesDescription

1	5	Z-Wave Plus Lifeline.The Hial CC and Basic Report CC (configured by parameter 80) can be sent to the associatd nodes in this group.
2	5	Forward the Basic Set, Switch Binary Set to associated nodes in Group 2 when the Plug receives the Ba sic Set, Switch Binary Set commands from the main controller.

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock further enhanced features.

IMPORTANT: Controllers may only allow configuring signed values. In order to set values in the range 128 … 255 the value sent in the application shall be the desired value minus 256. For example: To set a parameter to 200â€ˆit may be needed to set a value of 200 minus 256 = minus 56. In case of a two byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

Parameter 101: To set which report would be sent in Report group 1

To set which report would be sent in Report group 1
Size: 4 Byte, Default Value: 0

SettingDescription

1	Send Meter Report of Voltage
2	Send Meter Report of Current
4	Send Meter Report of Watt
8	Send Meter Report of kWh

Parameter 102: To set which report would be sent in Report group 2

To set which report would be sent in Report group 2
Size: 4 Byte, Default Value: 0

SettingDescription

1	Send Meter Report of Voltage
2	Send Meter Report of Current
4	Send Meter Report of Watt
8	Send Meter Report of kWh

Parameter 103: To set which report would be sent in Report group 3

To set which report would be sent in Report group 3
Size: 4 Byte, Default Value: 0

SettingDescription

1	Send Meter Report of Voltage
2	Send Meter Report of Current
4	Send Meter Report of Watt
8	Send Meter Report of kWh

Parameter 111: Set the time interval of sending Report

Set the time interval of sending Report
Size: 4 Byte, Default Value: 3

SettingDescription

1 – 2147483647	Interval Seconds

Parameter 112: Set the time interval of sending Report

Set the time interval of sending Report
Size: 4 Byte, Default Value: 600

SettingDescription

1 – 2147483647	Interval Seconds

Parameter 113: Set the time interval of sending Report

Set the time interval of sending Report
Size: 4 Byte, Default Value: 600

SettingDescription

1 – 2147483647	Interval Seconds

Parameter 20: Configure the output load status after re-power on

Configure the output load status after re-power on
Size: 1 Byte, Default Value: 0

SettingDescription

0	The last status before the power outage.
1	Always on
2	Always off

Parameter 200: PartnerID

PartnerID
Size: 1 Byte, Default Value: 0

SettingDescription

0	Aeon Labs Standard Product
1 – 127	Others

Parameter 252: Enable/disable Configuration Locked

Enable/disable Configuration Locked
Size: 1 Byte, Default Value: 0

SettingDescription

0	Disable
1	Enable

Parameter 254: Device Tag

Device Tag
Size: 2 Byte, Default Value: 0

SettingDescription

0 – 127	Device Tag

Parameter 255: Reset the Smart Switch

Reset the Smart Switch to factory default.
Size: 1 Byte, Default Value: 0

SettingDescription

0	Energy mode. The LED will follow the status (on/off).
1	Momentary indicate mode. When the state of Switchs load changed, The LED will follow the status (on/off) of its load, but the LED will turn off after 5 seconds if there is no any switch action.
2	Night light mode. The LED will remain the state that is set via the Multilevel Switch Set CC or Color Switch Set CC.
1	Reset all configuration parameters to default.
1431655765	Reset the Smart Switch to factory default

Parameter 3: Current Overload Protection.

Current Overload Protection. Output load will be closed after 2 minutes if the current overruns (US: 16.5A, AU: 10.5A, EU: 14A).
Size: 1 Byte, Default Value: 1

SettingDescription

0	Disabled
1	Enabled

Parameter 33: Set the RGB LEDs color for testing.

Set the RGB LEDs color for testing.
Size: 4 Byte, Default Value: 0

SettingDescription

0 – 255	Blue color value
256 – 65535	Green color value
65536 – 16711680	Red color value

Parameter 65: To set which report would be sent in Report group 1

To set which report would be sent in Report group 1
Size: 4 Byte, Default Value: 0

SettingDescription

1	Send Meter Report of Voltage
2	Send Meter Report of Current
4	Send Meter Report of Watt
8	Send Meter Report of kWh

Parameter 66: To set which report would be sent in Report group 2

To set which report would be sent in Report group 2
Size: 4 Byte, Default Value: 0

SettingDescription

1	Send Meter Report of Voltage
2	Send Meter Report of Current
4	Send Meter Report of Watt
8	Send Meter Report of kWh

Parameter 80: To set which notification would be sent to the associated nodes in association group 1

To set which notification would be sent to the associated nodes in association group 1 when the state of output load is changed.
Size: 1 Byte, Default Value: 0

SettingDescription

0	Nothing
1	Hail CC
2	Basic Report CC

Parameter 83: Configure the RGB value

Configure the RGB value when it is in Night light mode.
Size: 4 Byte, Default Value: 1774619

SettingDescription

0 – 255	Blue color value
256 – 65535	Green color value
65536 – 16711680	Red color value

Parameter 84: Configure the brightness level of RGB LED

Configure the brightness level of RGB LED (0%-100%) when it is in Energy Mode/Momentary indicate mode.
Size: 4 Byte, Default Value: 3289650

SettingDescription

0 – 100	The brightness of Red color
256 – 356	The brightness of Yellow color
65536 – 65636	The brightness of Green color

Parameter 90: Enable/disable the parameter 91 and 92

Enable/disable the parameter 91 and 92.
Size: 1 Byte, Default Value: 0

SettingDescription

0	Disable
1	Enable

Parameter 91: Induce an automatic report

The value here represents minimum change in wattage (in terms of wattage) to induce a Meter Report
Size: 2 Byte, Default Value: 25

SettingDescription

0 – 32767	The threshold can be set from 0 to 32767 watt.

Parameter 92: Induce an automatic report

The value here represents minimum change in wattage percent (in terms of percentage) to induce a Meter Report
Size: 1 Byte, Default Value: 5

SettingDescription

0 – 100	The threshold can be set from 0 to 100%.

Technical Data

Hardware Platform	ZM5101
Device Type	On/Off Power Switch
Network Operation	Always On Slave
Firmware Version	HW: 96 FW: 1.04
Z-Wave Version	6.51.10
Certification ID	ZC10-18106250
Z-Wave Product Id	0x0086.0x0103.0x0060
Supported Meter Type	Electric Energy
Firmware Updatable	Updatable by Consumer by RF
Electric Load Type	Dimmable LEDELV (Electronic)FluorescentIncandescentInductive (e.g. Motor)LED MLV (Magnetic)
Frequency	XXfrequency
Maximum transmission p ower	XXantenna

Supported Command Classes

- Association Grp Info
- Association V2
- Basic
- Clock
- Configuration
- Device Reset Locally
- Firmware Update Md V2
- Manufacturer Specific V2
- Meter V3
- Powerlevel
- Security
- Switch All
- Switch Binary
- Switch Color
- Switch Multilevel V3
- Version V2
- Zwaveplus Info V2

Controlled Command Classes

- Basic
- Hail
- Switch Binary

Explanation of Z-Wave specific terms

- **Controller** — is a Z-Wave device with capabilities to manage the network. Controllers are typically Gateways,Remote Controls or battery operated wall controllers.
- **Slave** — is a Z-Wave device without capabilities to manage the network. Slaves can be sensors, actuators and even remote controls.
- **Primary Controller** — is the central organizer of the network. It must be a controller. There can be only one primary controller in a Z-Wave network.
- **Inclusion** — is the process of adding new Z-Wave devices into a network.
- **Exclusion** — is the process of removing Z-Wave devices from the network.
- **Association** — is a control relationship between a controlling device and a controlled device.
- **Wakeup Notification** — is a special wireless message issued by a Z-Wave device to announces that is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.